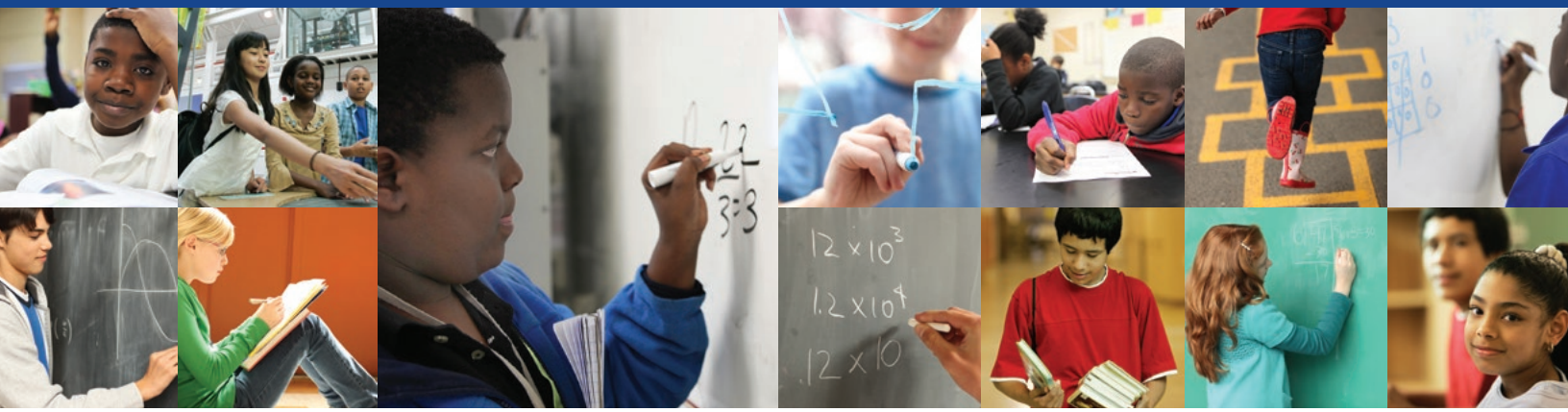
RIT
Reference Chart for Mathematics 2 – 5



MAP tests produce scores that make it possible to monitor student growth from year to year along developmental curriculum scales or continua. The chart inside shows examples of the kinds of work students can do at various points along the MAP RIT scale, assuming they have been exposed to content. This type of information is helpful in supporting appropriate instruction.

Please note that each subject area has a unique alignment to the RIT scale. As a result, scores between subjects are not equivalent.

How to use the charts:

1. **Find the column containing the student's score for a particular subject. For example, if the student's score in "Geometry" is 188, refer to the column labeled 181-190.**
2. **Read the column(s) from left to right to locate a sample test question for a given reporting area, such as "Geometry." A student's score suggests that, currently, he or she is likely to get about half of the questions of this difficulty correct.**
3. **Now look at the questions in the column(s) to the left, and higher on the page. The student is likely to get most of these correct, assuming he or she has been instructed in these skills and concepts.**
4. **The questions further down the page will probably require new learning on the student's part.**

Please note:

Test items in this booklet are sample items, and many are not calibrated or field-tested. For purposes of this document, RIT scale alignment is an approximation.

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Operations and Algebraic Thinking

Students can represent and solve problems involving the four operations, understand and apply properties of operations, generate and analyze patterns, and write and interpret numerical expressions.

below 161

6 + 2 = ☐

A. 4
✓**B.** 8
C. 9
D. 26
E. 62

161–170

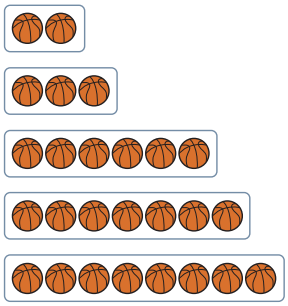
☐ + 7 = 13

☐ = ?

✓**A.** 6
B. 9
C. 10
D. 11
E. 18

171–180

Click on all the sets that have an odd number of basketballs.



181–190

Two children will share the dolls equally. How many dolls will each get?

A. 1
✓**C.** 4
B. 2
D. 8

191–200

Jill sold bags of raisins. The first day she sold 6 bags, and the second day she sold 12. On the third day she sold 18.

If Jill continues to sell bags following the same pattern, how many bags will she sell on the sixth day?

A. 54
D. 30
B. 48
E. 24
✓**C.** 36

201–210

There are 8 hot dog buns in a package. Shay wants to buy the LEAST number of packages to have enough buns for 50 hot dogs.

Which statement is true?

A. Shay should buy 6 packages. She will have exactly the correct number of buns.
B. Shay should buy 6 packages. She will have 2 buns left over.
C. Shay should buy 7 packages. She will have exactly the correct number of buns.
✓**D.** Shay should buy 7 packages. She will have 6 buns left over.

211–220

Which set contains all the factors of 20?

A. (5, 10, 15, 20)
B. (2, 4, 5, 10)
✓**C.** (1, 2, 4, 5, 10, 20)
D. (1, 2, 4, 5, 8, 10, 15, 20)

221–230

[6 × (9 – 4)] + [(6 + 4) ÷ 2]

What is the value of the expression?

A. 20
B. 30
✓**C.** 35
D. 38
E. 58

Numbers and Operations

Students understand the place value system by counting, representing, comparing, rounding, and performing operations with multidigit whole numbers, fractions, and decimals.

below **161**

How many?

A. 4
✓**B.** 5
C. 6
D. 7
E. 8

161–170

63
+ 34

A. 31
B. 37
C. 71
✓**D.** 97
E. 98

171–180

99
- 56

A. 34
B. 42
✓**C.** 43
D. 53
E. 155

181–190

60
× 5

What is the product?

A. 30
B. 65
✓**C.** 300
D. 365

191–200

$\frac{5}{7} - \frac{3}{7} =$

A. $\frac{8}{7}$
B. 2
✓**C.** $\frac{2}{7}$
D. 0
E. 7

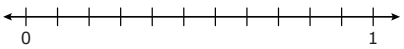
201–210

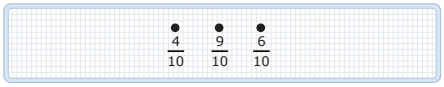
0.32 ÷ 8 =

A. 4.3
B. 0.15
✓**C.** 0.04
D. 0.4
E. 43.75

211–220

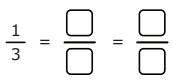
Drag the fractions from the toolbox to their correct location on the number line.

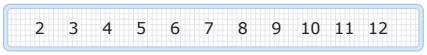




221–230

Drag the numbers to the boxes to make two different fractions equal to $\frac{1}{3}$.

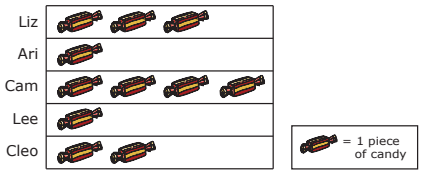




Measurement and Data

Students understand and solve measurement problems involving length, mass, liquid volume, time, money, area, perimeter, volume, and angle. They can generate, represent, and interpret data.

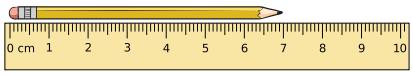
below 161



Who has the most candy?

A. Liz
B. Ari
✓**C.** Cam
D. Lee
E. Cleo

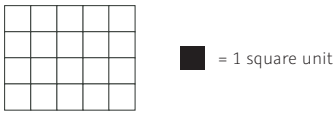
161–170



The pencil is about how many centimeters long?

A. 4 cm
B. 5 cm
C. 6 cm
✓**D.** 7 cm
E. 8 cm

171–180



What is the area of the figure?

A. 18 square units
B. 9 square units
✓**C.** 20 square units
D. 16 square units
E. 5 square units

181–190

The list shows how students in a class spent free time.

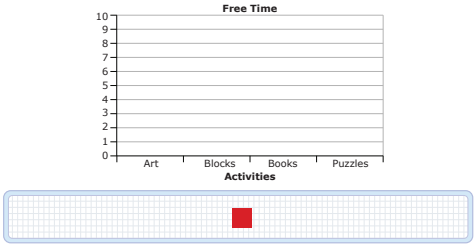
4 students made art.

2 students played with blocks.

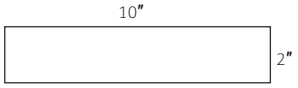
5 students read books.

3 students completed puzzles.

Drag the squares to make a bar graph of the data.



191–200



What is the perimeter of this rectangle?

A. 12 inches
✓**B.** 24 inches
C. 8 inches
D. 16 inches
E. 20 inches

201–210

A plane flew for 5 hours. Click on all the measurements that are equal to 5 hours.

15,000 seconds	18,000 seconds
30,000 seconds	300 minutes
150 minutes	250 minutes

211–220

4 yards = ☐

A. 16 feet
B. 20 feet
✓**C.** 144 inches
D. 80 inches
E. 36 inches

221–230

Regina needs $2\frac{1}{2}$ pounds of fertilizer for her plants. How many ounces is $2\frac{1}{2}$ pounds?

A. 16 ounces
B. 20 ounces
C. 30 ounces
✓**D.** 40 ounces
E. 48 ounces

Geometry

Students understand and reason with geometric concepts by identifying, describing, creating, and classifying two- and three-dimensional figures. They can solve mathematical problems by graphing points on the coordinate plane.

below 161

Which shape does NOT have any corners?

A. 

B. 

C. 

✓D. 

E. 

161-170

Which of these shapes is a triangle?

A. 

B. 

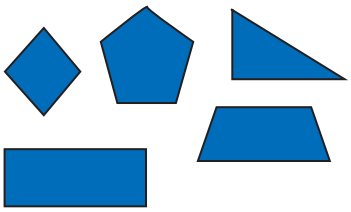
C. 

✓D. 

E. 

171-180

Click on all the quadrilaterals.



181-190

Which shape has symmetry?

A. 

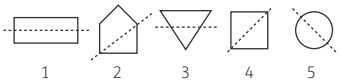
B. 

C. 

D. 

✓E. 

191-200

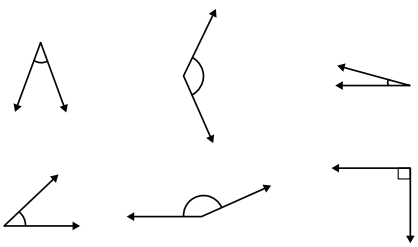


Which figures show a line of symmetry?

✓**A.** 1, 4, and 5
B. 2, 4, and 5
C. 4 and 5
D. 1 and 4
E. 2, 3, and 4

201-210

Click on all the obtuse angles.



211-220

Which statement about rectangles is true?

A. All rectangles are squares.
B. All rectangles are trapezoids.
C. All rectangles are rhombuses.
✓**D.** All rectangles are parallelograms.

221-230

Which shape is a parallelogram?

A. 

B. 

C. 

D. 

✓E.